



**2<sup>nd</sup> International Conference on Humanoid, Nanotechnology, Information  
Technology, Communication and Control, Environment, and Management 2005**  
HNICEM 2005

<http://www.dlsu.edu.ph/conferences/hnicem/>

*17-20 March 2005*

**HYATT Regency Hotel, Manila, Philippines**

**P R O G R A M M E**

**DAY 1: 17 March 2005 (Thursday)**

**TUTORIALS**

**DAY 2: 18 March 2005 (Friday - AM)**

07:15 REGISTRATION

08:50 OPENING PROGRAM

Welcome Remarks

**PROF. ELMER P. DADIOS, Ph.D.**  
General Chair, HNICEM 2005  
De La Salle University-Manila, Philippines

Opening Remarks

**DR. CARMELITA I. QUEBENGCO**  
Executive Vice President  
De La Salle University-Manila

Keynote Speech

**DR. ROGELIO A. PANLASIGUI**  
Undersecretary for R & D and  
Executive Director, Philippine Council for  
Advanced Science and Technology  
Research and Development (PCASTRD)  
Department of Science and Technology,  
Philippines

Master of Ceremonies:

**PROF. ALVIN B. CULABA, Ph.D.**  
Program Co-chair, HNICEM 2005  
De La Salle University-Manila

09:50 PLENARY LECTURE 1

Topic **SAFETY, SECURITY AND HEALTH FOR  
THE DEPENDABLE SOCIETY BY ROBOTIC  
AND MECHATRONIC TECHNOLOGY**

Speaker/Author **PROF. TOSHIO FUKUDA, Ph.D.**  
Nagoya University, Japan

Moderator PROF. ELMER DADIOS, Ph.D.

10:30 COFFEE BREAK

10:40 PLENARY LECTURE 2

Topic **THE ORIGIN OF ARTIFICIAL SPECIES:  
HUMANOID ROBOT HaNSaRam**

Speaker **PROF. JONG-HWAN KIM, Ph.D.**  
Korea Advanced Institute of Science and  
Technology, South Korea

Moderator PROF. ELMER DADIOS, Ph.D.

11:20 MESSAGE **PROF. LUIS SISON, Ph.D.**  
President, IEEE-Philippine Section  
Professor, Dept. of Electrical and Electronic  
Engineering  
UP-Diliman, Quezon City, Philippines

11:40 BRIEFING: HNICEM TECHNICAL SESSIONS AND ACTIVITIES

**PROF. MARCELO ANG, Ph.D.**  
National University of Singapore, Singapore  
Program Chair, HNICEM '03

LUNCH B R E A K

**DAY 2: PM**

**PARALLEL SESSION I**

Time (AM)	<b>ROBOTICS and HUMANOID 1</b> Session Chair: PROF. LUIS SISON	<b>COMMUNICATION AND CONTROL 1</b> Session Chair: PROF. FELICITO CALUYO
13:00	<b>IMAGE MATCHING ALGORITHM FOR VISION-BASED ROBOT NAVIGATION</b> <i>M. ANG, M. SAEDAN</i> National University of Singapore, Singapore	<b>S-BAND ERBIUM-DOPED FIBER AMPLIFIER</b> <i>S.W. HARUN<sup>2</sup>, H. AMHAD<sup>1</sup></i> <sup>1</sup> University of Malaya, Malaysia <sup>2</sup> Multimedia University, Malaysia
13:20	<b>3D FACE MODELING USING STEREOSCOPIC IMAGES AND FACIAL FEATURE RECOGNITION</b> <i>E. UY, A. LEE, H. SANTOS, M. SO, R. SO, E. SYBINGCO</i> De La Salle University-Manila	<b>GAIN CLAMPED DOUBLE-PASS L-BAND EDFA USING TWO FBGS IN THE SECOND STAGE</b> <i>H. AMHAD<sup>1</sup>, S.W. HARUN<sup>2</sup></i> <sup>1</sup> University of Malaya, Malaysia <sup>2</sup> Multimedia University, Malaysia
13:40	<b>STAIR-CLIMBING EIGHT-LEGGED ROBOT</b> <i>A. ABITRIA, C. ACEDILLA, K. ANG, C. BARLIS, J. GANO, E. DADIOS, E. CALILUNG</i> De La Salle University – Manila	<b>A MULTISERVICE PROVISIONING PLATFORM FOR WIRELESS ACCESS NETWORK TRAFFIC</b> <i>S. NCEMANE, H. CHAN</i> University of Cape Town, South Africa
14:00	<b>SIMSOCCER COACH</b> <i>C. DULALIA, P. TAN, P. GO, M. UY, R. BULOS</i> De La Salle University-Manila	<b>A DIAGNOSTIC ALGORITHM FOR TROUBLESHOOTING OF ELECTRONIC SYSTEMS AT BLOCK DIAGRAM LEVEL</b> <i>C. CO</i> Ateneo de Manila University, Philippines

**DAY 2: PM**

**PARALLEL SESSION II**

Time (PM)	<b>ROBOTICS and HUMANOID 2</b> Session Chair: DR. FLORANTE SALVADOR	<b>COMMUNICATION AND CONTROL 2</b> Session Chair: DR. FELIXBERTO CRUZ
14:20	<b>A NEW APPROACH TO MIROSOT VISION SYSTEM AND STRATEGY DEVELOPMENT</b> <i>S. CHOI, Y. LEE, J. KIM</i> Korea Advanced Institute of Science and Technology, Korea	<b>FASTICA-BASED TIME-FREQUENCY DOMAIN ALGORITHM FOR BLIND SEPARATION OF MIXED AUDIO SIGNALS IN A REAL ENVIRONMENT</b> <i>R. PASCUAL, E. SYBINGCO</i> De La Salle University–Manila
14:40	<b>FACIAL EXPRESSION RECOGNITION THROUGH PATTERN ANALYSIS OF FACIAL MUSCLE MOVEMENTS UTILIZING ELECTROMYOGRAM SENSORS</b> <i>L. ANG, E. BELEN, R. BERNARDO JR., E. BOONGALING, G. BRIONES, J. CORONEL</i> De La Salle University–Manila	<b>NOVEL APPROACH TO DETERMINATION OF MOTION PARAMETERS OF CAMERA</b> <i>K.I. SAKINA</i> Hakodate National College of Technology, Japan
15:00	<b>MICROMOUSE ROBOTIC PROJECT-ENHANCING AND ENRICHING BRUNEI SCHOOLS' SCIENCE CURRICULUM</b> <i>T. SHENG, W. DRAKE</i> Universiti Brunei Darussalam, Brunei	<b>GENETIC ALGORITHM WITH ADAPTIVE AND DYNAMIC PENALTY FUNCTIONS FOR CONSTRAINED OPTIMIZATION PROBLEM</b> <i>E. DADIOS, J. ASHRAF</i> De La Salle University-Manila
15:20	<b>MICROPROCESSOR-BASED MOBILE ROBOT WITH ON-BOARD VISION SYSTEM DRIVING RANGE GOLF BALL RETRIEVER</b> <i>M. CATIGUM, A. GUTIERREZ, D. RODRIGO, C. SAN JUAN, J. TAN, E. DADIOS</i> De La Salle University – Manila	<b>DETERMINATION OF EIGENFUNCTIONS AND EIGENFREQUENCIES OF PROBLEMS FOR THE CONTROL OF SMART STRUCTURES</b> <i>I. SADEK<sup>1</sup>, J. BRUCH, JR.<sup>2</sup>, J. SLOSS<sup>2</sup>, S. ADAL<sup>3</sup></i> <sup>1</sup> American University of Sharjah, UAE <sup>2</sup> University of California, USA <sup>3</sup> University of KwaZulu-Natal, South Africa

15:40	<p align="center"><b>A REAL TIME FUZZY LOGIC CONTROLLER SYSTEM DESIGN FOR A CAR-LIKE ROBOT PARKING SYSTEM</b></p> <p align="center"><i>I. SONG, F. KARRAY, M. MASOUMODI, H. LI, F. GUDEA</i></p> <p align="center">Systems Design Engineering, University of Waterloo, Canada</p>	<p align="center"><b>GENETIC ALGORITHM LEARNING BEHAVIOR: A CONTROLLER FOR THE FLEXIBLE POLE-CART BALANCING PROBLEM</b></p> <p align="center"><i>E. DADIOS<sup>1</sup>, P. FERNANDEZ<sup>1</sup>, D. WILLIAMS<sup>2</sup></i></p> <p align="center"><sup>1</sup>De La Salle University-Manila <sup>2</sup>Loughborough University, United Kingdom</p>
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16:00 PLENARY LECTURE 3

Topic **AGENT BASED DECISION MAKING  
SYSTEM FOR VRSD PROBLEMS**

Speaker **PROF. KAORU HIROTA, Ph.D.**  
Tokyo Institute of Technology, Yokohama, Japan

Moderator DR. FLORANTE SALVADOR, Ph.D.

**PARALLEL SESSION III**

Time (PM)	<p align="center"><b>NANOTECHNOLOGY AND MANUFACTURING</b></p> <p align="center">Session Chair: PROF. STEVEN LIANG</p>	<p align="center"><b>COMMUNICATION AND CONTROL 3</b></p> <p align="center">Session Chair: DR. FELIXBERTO CRUZ</p>
16:40	<p align="center"><b>THE DEVELOPMENT OF A MICRO- SCALE MACHINING CENTER</b></p> <p align="center"><i>D. COX<sup>1</sup>, G. NEWBY<sup>1</sup>, H. W. PARK<sup>1</sup>, S. Y. LIANG<sup>1</sup>, W. L. LIU<sup>2</sup>, S. HSIEH<sup>3</sup>, J. HWANG<sup>4</sup></i></p> <p><sup>1</sup>Georgia Institute of Technology, USA <sup>2</sup>National Changhua Univ. of Education, Taiwan <sup>3</sup>Precision Machinery R and D Center, Taiwan <sup>4</sup>Chung-Ju National University, South Korea</p>	<p align="center"><b>POTENTIAL ELECTRICITY SAVINGS BY VARIABLE SPEED CONTROL OF COMPRESSOR FOR AIR CONDITIONING SYSTEMS</b></p> <p align="center"><i>H. NASUTION<sup>1</sup>, M.N.W. HASSAN<sup>2</sup></i></p> <p><sup>1</sup>Bung Hatta University, Indonesia <sup>2</sup>Universiti Teknologi Malaysia, Malaysia</p>

17:00	<p><b>POLYSTYRENE NANOFIBER CATION EXCHANGER BY ELECTROSPINNING AND CATION EXCHANGE FIBERS BY COATING GLASS FIBER WITH POLY (STYRENE-CO-DIVINYLBENZENE)</b>  <i>H. AN<sup>1</sup>, C.SHIN<sup>2</sup>, M. HUR<sup>1</sup></i>  <sup>1</sup>Chung-Ju National University, Korea  <sup>2</sup>Samsung SDI Central Research, Korea</p>	<p><b>CROSS FLOW TURBINE SPEED CONTROL USING FUZZY LOGIC AND A MICROCONTROLLER</b>  <i>B. CABEBE, R. CABRAL, M. CHAN, R. GONZALES, L. GAN LIM, G. SALAZAR</i>  De La Salle University – Manila</p>
17:20	<p><b>MATHEMATICAL MODELING AND SIMULATION OF WET PROCESS ROTARY CEMENT KILNS WITH CHAIN SYSTEMS</b>  <i>F. MINTUS, S. HAMEL, W. KRUMM</i>  Universität Siegen, Germany</p>	<p><b>AN ARTIFICIAL NEURAL NETWORK BASED MICRO-HYDRO POWER GENERATION SCHEDULING</b>  <i>N. ESTOPEREZ, K. NAGASAKA</i>  Tokyo University of Agriculture and Technology, Japan</p>
Time (PM) Cont'd	<p><b>NANOTECHNOLOGY AND MANUFACTURING</b>  Session Chair: DR. JOSE E.P. MUTUC</p>	<p><b>COMMUNICATION AND CONTROL 3</b>  Session Chair: DR. FELIXBERTO CRUZ</p>
17:40	<p><b>A STUDY OF DEVELOPMENT FOR OVERUSE CUTOFF VALVE FOR LIQUID PETROLEUM GASES CYLINDER</b>  <i>J.K. RHIM<sup>1</sup>, A. CULABA<sup>2</sup>, S. I. LEE<sup>1</sup></i>  <sup>1</sup>Chung-Ju National University, Korea  <sup>2</sup>De La Salle University – Manila</p>	<p><b>PARTIAL STABILIZATION OF A QUADROTOR USING PID</b>  <i>C. ONG, K. CAMPOS, A. REFUERZO, J. TAMONDONG, K. YAP</i>  De La Salle University-Manila</p>
18:00	<p><b>MAKING MICRO-LENSES ON OPTICAL FIBRES</b>  <i>G. MILTON, Y. GHARBIA, J. KATUPITIYA</i>  University of New South Wales, Australia</p>	<p><b>INSIGHTS ON CONDITION NUMBERS AND OPTIMALLY CONDITIONED MATRICES</b>  <i>A. ESTALILLA, K. PINPIN</i>  De La Salle University–Manila</p>
18:20	<p><b>A SIMPLIFIED DESIGN PROCEDURE AND SOFTWARE FOR WELDED AXIAL FLOW PUMPS</b>  <i>A. CHUA, G. SALAZAR</i>  De La Salle University – Manila</p>	<p><b>PC-BASED AUTOMATIC ETCHER AND DRILLER FOR PRINTED CIRCUIT BOARDS</b>  <i>J. ACOSTA, L. CABANGON, H. ISRAEL, J. PEREZ, C. TAN, J. TIO</i>  De La Salle University – Manila</p>

18:40	<b>MODERNIZING EXISTING CNC MACHINE USING MECHATRONICS</b> <i>M. DURIAS, N. BUGTAI</i> De La Salle University – Manila	<b>AUTOMATIC MANEUVER SYSTEM FOR OVERTAKING</b> <i>P. BONDOC, S. GIRON, J. LIM, M. ORDINARIO, A. PANTOLA</i> De La Salle University – Manila
19:00	<b>END OF DAY 2 TECHNICAL SESSIONS</b>	

**DAY 3: 19 March 2005 (Saturday - AM)**

**08:30 PLENARY LECTURE 4**

Topic **INTERACTIVE REALITY SYSTEMS (IRiS): INTERACTIVE 3D VIDEO PLAYBACK IN MUTLIMEDIA APPLICATIONS**

Speaker **PROF. RAOUF NAGUIB, Ph.D.**  
Coventry University, Coventry, United Kingdom

Moderator **DR. ALVIN CHUA, Ph.D.**

**PARALLEL SESSION IV**

Time (AM)	<b>INFORMATION TECHNOLOGY/ BIOMEDICAL APPLICATIONS</b> Session Chair: DR. REMEDIOS BULOS	<b>ENVIRONMENT AND MANAGEMENT</b>  Session Chair: PROF. S. HAMEL
09:10	<b>INTRUSION DETECTION SYSTEM - MANAGEMENT SYSTEM</b> <i>A. PANTOLA, A. ADRIANO, N. SANCHEZ, J. TROGO, R. VILLAMAYOR</i> De La Salle University – Manila	<b>SETTING RIGHT TARGETS FOR WATER RECOVERY NETWORK USING WATER CASCADE ANALYSIS TECHNIQUE</b> <i>D. F. CHWAN YEE, Z. ABDUL MANAN</i> Universiti Teknologi Malaysia, Malaysia
09:30	<b>INTERNET WORKING VS. STANDARDIZATION OF WIRELESS NETWORK</b> <i>H.A. CHAN</i> University of Cape Town, South	<b>MODELLING AND OPTIMISATION OF TONGKAT ALI WATER EXTRACT PRODUCTION UTILISING A BATCH PROCESS SIMULATOR</b> <i>A. ATHIMULAM, S. KUMARESAN,</i>

	Africa	<i>D. F. CHWAN YEE, M. R. SARMIDI, R. ABDUL AZIZ</i> Universiti Teknologi Malaysia, Malaysia
09:50	<b>DESIGN FOR LAW IN INTERNET TECHNOLOGY</b> <i>Y. DENG<sup>1</sup>, H.A. CHAN<sup>2</sup></i> <sup>1</sup> Guangdong Dongsang Kunlun Law Firm, China <sup>2</sup> University of Cape Town, South Africa	<b>DRIVE CYCLE PROFILE OF TRICYCLES IN METRO MANILA</b> <i>M. BIONA<sup>1</sup>, A. CULABA<sup>2</sup></i> <sup>1</sup> Don Bosto Technical College, Philippines <sup>2</sup> De La Salle University-Manila
10:10	<b>AN ALGORITHMIC EVALUATION OF INFORMATION SEARCH USING A MOBILE AGENT-BASED FADED INFORMATION FIELD ARCHITECTURE</b> <i>M.J. SADEQ, I. AHMED</i> International Islamic University, Malaysia	<b>CLEAN-UP OF OIL-CONTAMINATED AREAS WITH NEW HIGH-PRESSURE VACUUM TECHNOLOGY</b> <i>W. KRUMM<sup>1</sup>, S. HAMEL<sup>1</sup>, H. SCHULTE<sup>2</sup></i> <sup>1</sup> Universität Siegen, Germany <sup>2</sup> AIRMATIC GmbH, Germany

10:30 PLENARY LECTURE 5

Topic	<b>HUMAN-CENTERED ROBOTICS</b>
Speaker	<b>PROF. OUSSAMA KHATIB, Ph.D.</b> Stanford University, California, USA
Moderator	PROF. MARCELO ANG, Ph.D.

**PARALLEL SESSION V**

Time (AM) Cont'd	<b>INFORMATION TECHNOLOGY/ BIOMEDICAL APPLICATIONS</b> Session Chair: DR. JULIUS MARIDABLE	<b>ENVIRONMENT AND MANAGEMENT</b> Session Chair: DR. ANTHONY SF CHIU
11:10	<b>APPLICATIONS OF CELLENGER<sup>®</sup> TO CORAL REEF IMAGE ANALYSIS</b> <i>R. Betty<sup>1</sup>, R. Canto<sup>2</sup>, L.David<sup>1</sup>, R. del Rosario<sup>1</sup>, W. Licuanan<sup>3</sup>,</i>	<b>HEALTH CARE TECHNOLOGY ADOPTION AND DIFFUSION IN A SOCIAL CONTEXT</b> <i>P.C. COYTE</i> University of Toronto, Canada

	<p><i>M. Vergara<sup>2</sup>, H. Yap<sup>2</sup></i>  <sup>1</sup>College of Science, UP-Diliman  <sup>2</sup>Marine Science Institute, UP-Diliman  <sup>3</sup>De La Salle University-Manila</p>	
11:30	<p><b>CONTRAST ENHANCEMENT OF BREAST FINE NEEDLE ASPIRATE SMEAR IMAGES</b>  <i>S. ESUGASINI, M. Y. MASHOR, N. A. MATISA, S. RAJOLI, N. H. OTHMAN</i>  Universiti Sains Malaysia, Malaysia</p>	<p><b>AVAILABILITY OF WATER FOR DOMESTIC PURPOSES IN RAJSHAHI DIVISION</b>  <i>MD. N.BARI<sup>1</sup>, M.H.RASHID<sup>2</sup>, MD. S. MIAH<sup>1</sup>, T.U. AHMED<sup>1</sup>, MD. A. HOSSAIN<sup>1</sup></i>  <sup>1</sup> Rajshahi Univ. of Eng'g. and Technology  <sup>2</sup> Khulna Univ. of Eng'g and Technology, Bangladesh</p>

11:50      **LUNCH BREAK**

**DAY 3: PM**

13:10      **PLENARY LECTURE 6**

Topic	<b>APPROACHES TO MODELLING OF ENERGY UTILIZATION TO PRODUCT LIFE CYCLES</b>
Speaker	<b>PROF. MICHAEL ROBERT I. PURVIS, Ph.D.</b> University of Portsmouth, Portsmouth, United Kingdom
Moderator	DR. RAYMOND TAN, Ph.D.

**PARALLEL SESSION VI**

Time (PM) Cont'd	<p><b>INFORMATION TECHNOLOGY/ BIOMEDICAL APPLICATIONS</b>  Session Chair: PROF EDUARDO MENDOZA</p>	<p><b>ENVIRONMENT AND MANAGEMENT</b>  Session Chair: DR. GREG PATRON</p>
13:50	<p><b>APPLICATIONS OF IMAGE ANALYSIS SOFTWARE IN CANCER RESEARCH AND MECHANISTIC STUDIES</b>  <i>M. DAVID, D. DE GUZMAN, E. PRIETO, G. CONCEPCION</i>  University of the Philippines-Diliman</p>	<p><b>LIFE-CYCLE CO<sub>2</sub>, CH<sub>4</sub>, NO<sub>x</sub> AND SO<sub>2</sub> EMISSIONS FROM PULVERIZED COAL AND WASTE PAPER CO-FIRING FOR POWER GENERATION</b>  <i>R. TAN<sup>1</sup>, C. DE CAROLIS<sup>2</sup>, S. SANTOS<sup>3</sup>, G. RIVA<sup>2</sup></i>  <sup>1</sup>De La Salle University – Manila  <sup>2</sup>Marche Polytechnic University, Italy</p>

		<sup>3</sup> IFRF, The Netherlands
14:10	<p><b>AUTOMATIC HEREDITARY NON-POLYPOSIS COLORECTAL CANCER RISK ASSESSMENT BASED ON PEDIGREE DATA</b>  <i>M. KÖKÜER<sup>1</sup>, R. NAGUIB<sup>1</sup>, P. JANČOVIČ<sup>2</sup>, B. YOUNGHUSBAND<sup>3</sup>, R. GREEN<sup>3</sup></i>  <sup>1</sup>Coventry University, UK  <sup>2</sup>University of Birmingham, UK  <sup>3</sup>University of Newfoundland, Canada</p>	<p><b>A COMPARATIVE ANALYSIS OF 5 LIFE CYCLE IMPACT ASSESSEMENT METHODOLOGIES USING VARIOUS VEHICLE FUEL SYSTEMS</b>  <i>L. PASCUAL-AQUINO, K. AVISO, R. TAN, A. CULABA</i>  De La Salle University-Manila</p>
14:30	<p><b>A KNOWLEDGE MGT. APPROACH TO INCREASE UPTAKE IN A BREAST SCREENING PROGRAMME</b>  <i>V. BASKARAN, R.K. BALI, R. NAGUIB, H. AROCHENA</i>  Coventry University, United Kingdom</p>	<p><b>MANAGEMENT OF GROUND WATER CONTAINING HIGH CONCENTRATION OF IRON</b>  <i>MD. A. HOSSAIN, MD. S.U. MIAH, T.U. AHMED, MD. N. BARI</i>  Rajshahi University of Engineering and Technology, Bangladesh</p>
14:50	<p><b>HEURISTIC PARAMETER ESTIMATION METHODS FOR S-SYSTEM MODELS OF BIOCHEMICAL NETWORKS</b>  <i>P. C. NAVAL, JR<sup>1</sup>, O. R. GONZALEZ<sup>1</sup>, E. MENDOZA<sup>1,2</sup>, L.G. SISON<sup>1</sup></i>  <sup>1</sup>UP – Diliman, Philippines  <sup>2</sup>Ludwig Maximillians University-Munich</p>	<p><b>KINETICS OF THE PYROLYSIS OF WOOD FROM THERMOGRAVIMETRIC ANALYSIS</b>  <i>S. HAMEL<sup>1</sup>, G. LIM<sup>2</sup>, M.R.I. PURVIS<sup>2</sup>, C. SALAZAR<sup>3</sup></i>  <sup>1</sup>Universitat Siegen, Siegen, Germany  <sup>2</sup>University of Portsmouth, U.K.  <sup>3</sup>De La Salle University-Manila, Philippines</p>
15:10	<p><b>A FOLLOW-UP ON THE AUTOMATED FOLLOWING VEHICLE SYSTEM</b>  <i>G. CU, J. SEGUBRE, S. SUN, A. TAN, A. VELUZ</i>  De La Salle University-Manila</p>	<p><b>PERFORMANCE COMPARISON BETWEEN HMLP, MLP AND AR MODELS WITH APPLICATION TO CARBON MONOXIDE CONCENTRATION FORECASTING</b>  <i>USHARANI RAJI, M.Y. MASHOR, A.H. ADOM, A.N. ALI, A.F. SADULLAH</i>  University Science Malaysia, Malaysia</p>
15:30	<p><b>DESIGNING IMAGE RETRIEVAL SYSTEM WITH CONCEPTS OF VISUAL KEY</b>  <i>M. SERATA, K. HIROTA</i>  Tokyo Institute of Technology  Kanagawa, Japan</p>	<p><b>DESIGN, FABRICATION AND TESTING OF A BIODEGRADABLE WASTE COMPOSTER FOR THE ECOLOGICAL SWM PROGRAM OF DASMARINAS, CAVITE, PHILIPPINES</b>  <i>A. MANSILLA<sup>1</sup>, J. HERNANDEZ<sup>2</sup>,</i></p>

		<p><i>J.P. ESPILOY<sup>3</sup>, A. MAGLAYA<sup>2</sup></i>  <sup>1</sup>Technological University of the Philippines  <sup>2</sup>De La Salle University-Manila  <sup>3</sup>Ausworld Consultants Ltd.</p>
15:50	<p><b>GROWING INTERDISCIPLINARY SCIENCE &amp; EMERGING TECHNOLOGIES THROUGH COMMUNITIES OF PRACTICE</b>  <i>E. MENDOZA</i>  Ludwig-Maximilians-University, Munich/  University of the Philippines-Diliman,</p>	<p><b>DESIGN AND EXPERIMENTAL ANALYSIS OF A COMBINED TARGET FLUIDIC AND CENTRIFUGAL PUMP SYSTEM AS A TACHOMETER TRANSDUCER</b>  <i>L. UY, M. KALAW</i>  De La Salle University-Manila</p>
16:10	<p><b>ADOPTING CMMI FOR A SMALL SOFTWARE ORG: EXPERIENCES GAINED AND LESSONS LEARNED</b>  <i>V. TIONG, R. BULOS</i>  De La Salle University – Manila</p>	<p><b>FERROELECTRIC PROPERTIES OF SBT CAPACITOR WITH ANNEALING TEMPERATURES</b>  <i>S. I. LEE, J. K. RHIM,</i>  Chungju National University, Chungju, Korea</p>
16:30	<p><b>AN AUTOMATIC CLUTCH ACTUATION SYSTEM FOR MANUAL-TRANSMISSION TYPE VEHICLE</b>  <i>J.R. GOCO, S. MANALILI, J. R. JOSE, R. KING, G. CU</i>  De La Salle University-Manila</p>	<p><b>GASIFICATION SYSTEMS FOR BIOMASS UTILIZATION</b>  WEIL, HASSELBACH, HAMEL, KRUMM  University of Siegen, Germany</p>
16:50	<p><b>COMMERCIAL, INSTITUTIONAL AND INDUSTRIAL RECOVERY IN WASTE MANAGEMENT: A CASE STUDY OF WEST VIRGINIA</b>  <i>K.M. PANDEY, M. KAPUR</i>  National Institute of Technology, Silchar, India</p>	<p><b>LEARNING THROUGH SIMULATION: STUDENT ENGAGEMENT</b>  <i>S. J. STREICHER, K. WEST, D. M. FRASER<sup>1</sup>, J.M. CASE</i>  University of Cape Town, South Africa</p>
17:10	<p><b>ROBUST TUNING OF PID CONTROLLER WITH DISTURBANCE REJECTION USING BACTERIAL FORAGING BASED OPTIMIZATION</b>  <i>D.H. KIM, JAE HOON CHO</i>  Hanbat National University, Korea</p>	<p><b>STRATEGIES AND PROGRAMS TO UPGRADE ENGINEERING EDUCATION IN THE PHILIPPINES</b>  <i>M. BELINO</i>  De La Salle University-Manila</p>
17:30	<p><b>BUILDING INTELLIGENT ROBOTIC SYSTEMS WITH</b></p>	<p><b>A COORDINATED HYBRID AGENT FRAME WORK AS APPLIED TO</b></p>

	<p><b>DISTRIBUTED COMPONENTS</b>  <i>F. GUEDEA<sup>1</sup>, I. SONG<sup>2</sup>, F. KARRAY<sup>2</sup>,  R. SOTO<sup>1</sup></i></p> <p><sup>1</sup> Center of Innovation in Design and  Technology, ITESM, Mexico  <sup>2</sup> University of Waterloo, Canada</p>	<p><b>HETEROGENEOUS MULTI-AGENT  CONTROL</b>  <i>H. LI, F. KARRAY, O. BASIR, I. SONG</i></p> <p>Systems Design Engineering, University of  Waterloo, Canada</p>
17:50	<b>WRAP-UP AND END OF TECHNICAL SESSIONS</b>	